

WHAT IS CLAIMED IS:

1. A restraint system for a vehicle seat that provides a seat occupant options for multiple seat belt configurations, the restraint system comprising:

a plurality of anchor points at predetermined locations about the vehicle seat for seat belt webbing;

a three or a four-point belt restraint arrangement for the occupant provided by the anchor points; and

a five-point belt restraint arrangement for the occupant provided by the anchor points.

2. The restraint system of claim 1 wherein the anchor points provide for both the three-point and the four-point belt restraint arrangements.

3. The restraint system of claim 1 wherein the seat has opposed lateral sides, the plurality of anchor points comprise a pair of anchor points along each side of the seat, and the seat belt webbing includes a first belt member extending between one of the pairs of anchor points along one side of the vehicle seat and a second belt member extending between the other of the pairs of anchor points along the other side of the vehicle seat.

4. The restraint system of claim 1 wherein the plurality of anchor points include a buckle and a lower fixed anchor member on both sides of the seat to provide for both the three and four-point belt restraint options.

5. The restraint system of claim 1 wherein the five-point belt restraint arrangement is comprised of a first portion of the seat belt webbing extending between two anchor points along one side of the vehicle seat, a second portion of the seat belt webbing extending between another two

anchor points along the other side of the vehicle seat, a first tongue on the first belt webbing, a second tongue on the second belt webbing and a buckle generally mounted to or adjacent the vehicle seat adapted to receive both the first and the second tongue.

6. The restraint system of claim 4 further comprising a dual buckle located generally between said buckles for releasably latching with latching members to provide the five-point belt restraint arrangement, with the latching members dividing said first and said second belt members into shoulder portions and leg portions, for restraining the seat occupant's torso and legs respectively.

7. The restraint system of claim 6 wherein the leg portions of the belt members are located in side-by-side relationship.

8. The restraint system of claim 1 wherein the anchor points are arranged in first and second three-point belt restraint arrangements generally on opposite sides of the vehicle seat.

9. The restraint system of claim 8 wherein the first and second three-point belt restraint arrangements are symmetrical.

10. The restraint system of claim 8 wherein the three-point belt arrangements each include a latch plate and a corresponding buckle generally on opposite sides of the seat prior to deployment, and a floor anchor on opposite sides of the seat adjacent each of the buckles.

11. The restraint system of claim 8 wherein each three-point belt arrangement includes belt webbing generally divided into shoulder and lap belt portions when deployed with the lap belt portions generally overlapping with each three-point belt arrangement deployed.

12. The restraint system of claim 1 wherein the anchor points are arranged in first and second three point belt restraint arrangements on opposite sides the vehicle seat, each three point belt restraint arrangement including a retractor for carrying a supply of the webbing, a tongue slidably carried on the webbing, and a buckle.

13. A restraint system for a vehicle seat that provides a seat occupant options for multiple seat belt configurations, the restraint system comprising:

a plurality of anchor points at predetermined locations about the vehicle seat for seat belt webbing;

a first three-point belt restraint arrangement for the seat occupant provided by the anchor points;

a second three-point belt restraint arrangement for the seat occupant provided by the anchor points and substantially symmetrically arranged relative to the first three-point belt restraint arrangement; and

a connector of the plurality of anchor points for cooperating with the first and second three-point seat belt arrangements to allow the seat occupant to select either of the three-point belt arrangements or a four-point belt arrangement or a five-point belt arrangement.

14. The restraint system of claim 13 wherein the first and second three-point belt restraint arrangements each include a tongue and the connector includes a dual buckle associated with the vehicle seat configured to receive each of the tongues in the five-point belt arrangement.

15. The restraint system of claim 13 wherein the anchor points of the first and second three-point belt restraint arrangements each include a buckle and a fixed anchor on either side of the seat.

16. The restraint system of claim 13 wherein the first and second three point belt restraint arrangements are comprised of corresponding first and second seat belt webbing members extending between upper and lower ones of the anchor points on either side of the seat, a buckle mechanism generally adjacent either side of the seat, and a tongue along each of the belt webbing members for dividing the members into shoulder and lap belt portions with the tongues secured to the corresponding buckle mechanisms.

17. The restraint system of claim 16 wherein the tongues are slidable along said first and said second belt members.

18. The restraint system of claim 13 wherein the vehicle seat includes a seat framework and the vehicle seat is mounted within a vehicle having a vehicle structure and the anchor points are mounted to one of said seat framework and said vehicle structure.

19. The restraint system of claim 15 wherein:

the first and second three point belt restraint arrangements are each comprised of a portion of the seat belt webbing extending between upper and lower ones of the anchor points generally adjacent the vehicle seat,

a buckle mechanism generally adjacent the vehicle seat;

a tongue along the belt member for dividing the belt member into shoulder belt and lap belt members with the tongue secured to the buckle mechanism; and

the connector includes a two-position buckle generally mounted to or adjacent the vehicle seat configured to receive each of the tongues in the five-point belt arrangement.

20. A restraint system for a vehicle seat that provides a seat occupant options for multiple seat belt configurations, the restraint system comprising:

a plurality of anchor points at predetermined locations about the vehicle seat for seat belt webbing;

a first three-point belt restraint arrangement for the seat occupant provided by the anchor points;

a second three-point belt restraint arrangement for the seat occupant provided by the anchor points and substantially symmetrically arranged relative to the first restraint arrangement; and

a tongue and a buckle associated with each of the first and second three-point belt arrangements to provide overlapping lap belt portions of the three-point belt arrangements securing the lap of the seat occupant.

21. The restraint system of claim 20 wherein the tongue associated with the first three-point belt arrangement is located along a first portion of the belt webbing extending between two of the anchor points and the tongue associated with the second three-point belt arrangement is located along a second portion of the belt webbing extending between another two of the anchor points.

22. The restraint system of claim 21 wherein the two anchor points for each of the three-point belt arrangements includes an upper guide anchor and a lower floor anchor for the first and second belt portions.

23. The restraint system of claim 20 wherein the anchor points for each of the three-point belt arrangements includes a pair of floor mounted anchors on each side of the seat.

24. The restraint system of claim 23 wherein one of the pair of floor mounted anchors is a buckle and the other is webbing anchor member.

25. The restraint system of claim 20 further comprising:

a dual buckle generally mounted to or adjacent the vehicle seat configured to receive each of the tongues of the first and second three-point belt arrangements; and

a five-point belt restraint arrangement for the seat occupant provided by the anchor points and the dual buckle.

26. A restraint system for a vehicle seat that provides a seat occupant options for multiple seat belt configurations including three-point, four-point and five-point restraint configurations, the restraint system comprising:

a seat having a back rest and a seat rest extending between a first side and a second side of the seat;

seat belt webbing associated with the seat;

a first set of anchor points generally adjacent the first side of the seat having a first portion of the belt webbing extending therebetween;

a second set of anchor points generally adjacent the second side of the seats having a second portion of the belt webbing extending therebetween;

a first tongue located along the first belt portion;

a second tongue located along the second belt portion;

a first buckle mechanism generally adjacent the first side of the seat adapted to receive the second tongue;

a second buckle mechanism generally adjacent the second side of the seat adapted to receive the first tongue; and

a third buckle mechanism generally mounted to or adjacent the seat rest, adapted to receive both the first tongue and the second tongue.

27. The restraint system of claim 26 wherein the third buckle mechanism has a buckle housing including tongue receptacles with one receptacle adapted to receive the first tongue and another receptacle adapted to receive the second tongue.

28. The restraint system of claim 26 wherein the third buckle mechanism is generally mounted to or adjacent the seat rest in a location generally between the first and second buckle mechanisms.

29. The restraint system of claim 28 wherein the vehicle seat includes a seat framework and the vehicle seat is mounted within a vehicle having a vehicle structure and the anchor points are mounted to one or both of said seat framework and said vehicle structure.

30. The restraint system of claim 26 wherein the first and second tongues are slidable along said first and said second belt portions.

31. A restraint system for a vehicle seat, having multiple seat belt components and which permits the seat occupant to configure the seat belt components in a number of different restraint configurations, the restraint system comprising:

a pair of seat belt sub-systems associated with the vehicle seat, each seat belt sub-system comprising a retractor containing a supply of seat belt webbing having a free end, a fixed anchor point secured to the seat belt webbing free end, a tongue slidable along the seat belt webbing and a tongue-engaging buckle;

a dual buckle located generally between the buckles of the seat belt sub-systems and engageable with the tongues of the seat belt sub-systems;
and

said restraint system configurable in four restraint configurations, including a first restraint configuration in which the seat belt webbing of one of the seat belt sub-systems is latched so as to cross the occupant's torso in the first direction and so as to cross the occupant's lap, a second restraint configuration in which the seat belt webbing of the other seat belt system is latched so as to cross the occupant's torso in a second direction and so as to cross the occupant's lap, a third restraint configuration in which the seat belt webbing of the seat belt sub-systems criss-crosses the occupant's torso and crosses the occupant's lap and a fourth restraint configuration in which the seat belt webbing of the seat belt sub-systems crosses the occupant's torso in a generally V-shaped pattern, crosses the occupant's legs and is coupled to the dual buckle at a point generally between the occupant's legs.

32. The restraint system of claim 31 wherein the vehicle seat has opposed lateral sides, and the buckle of one seat belt sub-system is located on one side of the vehicle seat and engages the tongue of the other seat belt sub-system located on the other side of the vehicle seat, and the buckle of the other seat belt sub-system is located on the other side of the vehicle seat and engages the tongue of the other seat belt sub-system located on the one side of the vehicle seat.

33. The restraint system of claim 32 wherein the vehicle seat includes a seat framework and the vehicle seat is mounted within a vehicle having a vehicle structure and the retractors, the anchor points at the webbing free ends, and the buckles of the seat belt sub-systems are mounted to one or both of said seat framework and said vehicle structure.

34. The restraint system of claim 32 wherein the retractors of the seat belt sub-systems are mounted in the vehicle seat.